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10/562,811	12/29/2005	Hironaki Sano	012774-006	6482
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EXAMINER				
CAILLOUET, CHRISTOPHER C				
ART UNIT		PAPER NUMBER		
1791				
NOTIFICATION DATE		DELIVERY MODE		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com

Office Action Summary

Application No.

10/562,811

Applicant(s)

SANO ET AL.

Examiner

CHRISTOPHER C. CAILLOUET

Art Unit

1791

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/US)
- Paper No(s)/Mail Date 12/29/2005
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

Examiner: Caillouet

July 28, 2008

TUBE JOINING DEVICE

DETAILED ACTION

Claim Rejections – 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim is unclear and not in idiomatic English. In particular the phrase "when the connecting process information memorized in the non-volatile memory is information expressing being in a state of non-connecting operation," is unclear.
3. Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim is unclear and not in idiomatic English. In particular the phrase "the controlling section drives the non-volatile memory to memorize information expressing being exchanged as the exchange information of the cutting plate," is unclear.

Claim Rejections – 35 USC § 102/103

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-9 and 11-12 are rejected under 35 U.S.C. 102(b) as anticipated by Ivansons et al. (US 5279685) or, in the alternative, under 35 U.S.C. 103(a) as obvious over Ivansons et al. (US 5279685).

Ivansons et al. (Ivansons) discloses a device for selectively connecting and disconnecting plastic tubes which includes a welder (Abstract). Ivansons discloses that the apparatus has a holding section which presses tubing into a flat state (column 7, lines 9-10), a cutting section (wafer) which cuts the tubes held in a flat state by the holding section (column 3, lines 45-47), an heater elements for heating the cutting section (column 4, lines 11-13), a unit that moves the wafer from the start position to the cutting position (column 3 line 67- column 4, line 10), a sensor that detects the movement of the wafer (column 4, lines 14-19), a unit that moves the holding sections together in order to weld the tubing together (column 8, lines 16-27), and a computer which controls the power supply to the wafer heater and the wafer movement unit (column 5, lines 35-41). Ivansons further discloses that the computer checks the status of the necessary apparatus elements in order to determine if the device is ready for operation and if it will do a connect or disconnect with the tubes (column 10, lines 23-30). Ivansons does not

specifically state that power is supplied to an electrode to heat the wafer, but it is likely inherent that an electrode is used on the circuit that Ivansons computer uses to supply power to the heating unit for the wafer.

In the even that Ivansons uses an electric supply other than an electrode, it is the position of the examiner that use of an electrode to heat a cutting member for welding plastic tubes is well known in the art and would have been obvious to one of ordinary skill in the art to use as a heater in the apparatus of Ivansons. An example of this is taught by Fleischmann et al. (Fleischmann; US 5059270). Fleischmann teaches a process for the welding of plastic films (Abstract). Fleischmann teaches the use of a plastics welding electrode wherein the electrode is used to supply heat to a cutting blade which cuts and welds the plastic film (column 4 lines 57-68). It would have been obvious to one of ordinary skill in the art to use a well-known method of heating a cutting blade/wafer for the welding of plastics such as the use of an electrode.

As to claim 2, the method of claim 1 is taught as seen above. Ivansons discloses that the computer may use non-volatile memory which memorizes the connecting process information, whether the apparatus is in the connect/disconnect mode (column 11, lines 27-35).

As to claim 3, Ivansons discloses the use of a lock lip that prevents the tube holding means from disengaging with the tubes (column 4, lines 23-43). Ivansons further discloses that a sensing means (column 4, lines 63-66) can be included so that the computer can ensure the clamps are in their closed position before starting the welding process (column 7, lines 60-64).

As to claim 4, Ivansons discloses the use of a visual display device to for the computer to indicate such things as whether the wafer is properly loaded (column 8, lines 29-31) or if the welder is in the connect or disconnect mode (column 9, lines 8-10).

As to claim 5, Ivansons discloses that the computer stores whether the apparatus is in the connect/disconnect position (column 11, lines 16-30). Ivansons discloses that the controller tests the tubing to determine whether or not the tubes are loaded properly discloses that when the wafer begins heating the tubes the time is noted and saved by the controller, and the tubes are driven into the sides of the wafer at a controlled rate determined by the melt rheology (column 8, lines 10-15).

As to claim 6, the method of claim 2 is taught as seen above. Ivansons discloses the use of sensors to detect whether the holding sections have reached a position where the tubes may contact each other and thus form a weld (column 5, line 63- column 6, line 2). Ivansons discloses that the computer stores whether the apparatus is in the connect/disconnect position (column 11, lines 16-30).

As to claims 7 and 8, the method of claim 2 is taught as seen above. As stated previously, Ivansons discloses a unit that moves the wafer from the start position to the cutting position (column 3 line 67- column 4, line 10), a sensor that detects the movement of the wafer (column 4, lines 14-19). Ivansons discloses that the apparatus has a wafer supply section which supplies wafers to the cutting section (column 7, lines 33-40). The nonvolatile memory remembers the exchange process for disposing of a used wafer and inserting a new wafer for the process (column 7, lines 40-43; column 8, lines 16-23). The computer also determines whether a new wafer is loaded properly before allowing the welding process to begin (Id.). Ivansons further discloses that during the disconnect process, exchange information in the non-volatile memory is used by the computer to convey the used wafer in the disconnect process to the wafer removal station (column 9, lines 39-45).

As to claim 9, the method of claim 2 is taught as seen above. Ivansons discloses the use of a lock lip that prevents the tube holding means from disengaging with the tubes (column 4, lines 23-43). Ivansons further discloses that a sensing means (column 4, lines 63-66) can be included so that the computer can ensure the clamps are in their closed position before starting the welding process (column 7, lines 60-64).

As to claims 11 and 12, Ivansons et al. (Ivansons) discloses a device for selectively connecting and disconnecting plastic tubes which includes a welder (Abstract). Ivansons discloses that the apparatus has a holding section which presses tubing into a flat state (column 7, lines 9-10), a cutting section (wafer) which cuts the tubes held in a flat state by the holding section (column 3, lines 45-47), an heater elements for heating the cutting section (column 4, lines 11-13), a unit that moves the wafer from the start position to the cutting position (column 3 line 67- column 4, line 10), a sensor that detects the movement of the wafer (column 4, lines 14-19), a unit that moves the holding sections together in order to weld the tubing together (column 8, lines 16-27), and a computer which controls the power supply to the wafer heater and the wafer movement unit (column 5, lines 35-41). Ivansons further discloses that the computer judges checks the status of the necessary apparatus elements in order to determine if the device is ready for operation and if it will do a connect or disconnect with the tubes (column 10, lines 23-30). Ivansons also discloses the use of a lock lip that prevents the tube holding means from disengaging with the tubes (column 4, lines 23-43). Ivansons further discloses that a sensing means (column 4, lines 63-66) can be included so that the computer can ensure the clamps are in their closed position before starting the welding process (column 7, lines 60-64). Ivansons discloses the use of a visual display device to for the computer to indicate such things as whether

the wafer is properly loaded (column 8, lines 29-31) or if the welder is in the connect/disconnect mode (column 9, lines 8-10). Ivansons further discloses that the computer may use non-volatile memory which memorizes the connecting process information and whether the apparatus is in the connect/disconnect mode (column 11, lines 27-35). Ivansons discloses that if a reset operation is necessary upon start up of the apparatus the display section will display an error indication (column 7, lines 40-43).

Ivansons does not specifically state that power is supplied to an electrode to heat the wafer, but it is inherent that an electrode is used on the circuit that Ivansons computer uses to supply power to the heating unit for the wafer. It is the position of the examiner that use of an electrode to heat a cutting member for welding plastic tubes is well known in the art and would have been obvious to one of ordinary skill in the art to use as a heater in the apparatus of Ivansons. An example of this is taught by Fleischmann et al. (Fleischmann). Fleischmann teaches a process for the welding of plastic films (Abstract). Fleischmann teaches the use of a plastics welding electrode wherein the electrode is used to supply heat to a cutting blade which cuts and welds the plastic film (column 4 lines 57-68). It would have been obvious to one of ordinary skill in the art to use a well-known method of heating a cutting blade/wafer for the welding of plastics such as the use of an electrode.

7. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ivansons et al. (US 5279685), or in the alternative, over Ivansons et al. (US 5279685) as applied to claim 3 above, and further in view of Sano et al. (US 6463979).

Ivansons fails to disclose the use of a solenoid and a plunger to help ensure that the holding members stay in the closed position. Sano et al. (Sano) discloses a tube connecting apparatus for melting to cut flexible tubes for connecting the tubes by mutually contacting the cut end faces (column 1, lines 7-9). Sano teaches the use of a solenoid and a plunger to help ensure that the holding members stay in the closed position (column 15, lines 23-29). Sano teaches the use of the solenoid and the plunger prevents the clamps from being erroneously opened during the welding process. It would have been obvious to one of ordinary skill in the art to incorporate the teachings of Sano et al. into the apparatus of Ivansons et al. because Sano et al. teaches that the use of a solenoid and plunger ensure that the holding members don't erroneously open during the process and allow unwanted movement of the tubes.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTOPHER C. CAILLOUET whose telephone number is (571)270-3968. The examiner can normally be reached on Monday - Thursday; 9:30am-4:00pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Phillip Tucker can be reached on (571) 272-1095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Christopher C Caillouet/
Examiner, Art Unit 1791

/Mark A Osele/
Primary Examiner, Art Unit 1791